Glowacki, J.

3887

677.151.031.6

Glowackl J. Combing the Fibre of China Grass.

„Czesanie włókna ramii". (Prace Inst. Włókien. No. 12), Warszawa, 1954, WPLiS, 11 pp., 28 tabs.

A description of tests carried out on combing fibres of ramie, after having submitted them to a preliminary preparation consisting of 1) mechanical softening; 2) mechanical softening combined with emulsion moistening; 3) biological steeping combined with mechanical softening; 4) chemical steeping combined with mechanical softening. In all four cases, it was found that 1) when the speed of the combing canvass of the mechanical combers was increased, the production diminished proportionally; 2) when the needles on the combing canvass were more densely disposed, a slight proportional lowering of efficiency and a slight rising of the average count resulted; 3) augmenting the number of steps on the mechanical combers induced a proportional lowering of production and a rise in the average count of the fibre curried; 4) moistening of the fibre with emulsion before combing improved the effects of combing.

Glowacki, J

3880   077.019 : 077.191.021.6

Glowacki J., Dowgielewicz S. Characteristics of the Combed Fibre of *MT*
Ramie and the Comber Waste, on the Basis of Organotechnical Valuation
and Laboratory Tests.

„Charakterystyka czesanego włókna ramii i wyczesków ramiowych
na podstawie oceny organotechnicznej i analizy laboratoryjnej". (Prace
Inst. Włókien. No, 12), Warszawa, 1954, WPLiS, 10 pp., 7 figs., 30 tabs.

Larger quantities of combed fibre and comber waste were mried on
the basis of the grade of evenness of the combing as well as of the soft-
ness of the fibre. Selected assortments were tested in the laboratory to
confirm the correctness of the organotechnical valuation. Physical pro-
perties of the fibre were examined (strength, flexibility, divisibility,
length and contents of glued strips). These investigations confirmed the
organotechnical valuation. Suggestions are made concerning the possibi-
lity of spinning the raw material examined.

(1)

Distr: 4З2c(J)

Emission anisotropy of photoluminescence of Plexiglass luminophors. I. Glowacki, A. Kawski, and B. Pilacka (Politech., Gdansk, Poland). Bull. acad. polon. sci., Sér. sci. Math., astron. et phys. 7, 353-6(1959)(in English).—The emission anisotropy, r, (Jabłoński, CA 53, 14085f; 52, 7854d) (related to the degree of polarization, P, by the equation $r = 2P/(3 - P)$) was measured by a visual method (Kawski, CA 53, 2787a; preceding abstr.), for yellow eosin ($C_{20}H_6O_5Br_4K$), tetrabromofluorescein, and fluorescein, in Me methacrylate or in Me methacrylate with EtOH, which were slowly (30-40 days) polymerized. The solns. were excited with a Hg lamp with a Wood filter and Glan polarizing prism. A decrease of r with concn. increase was observed for yellow eosin and tetrabromofluorescein solns., and a const. r was found for fluorescein, while Czajkowski and Grzywacz (CA 52, 13439e) observed a rise of r with concn. for eosin. The excitation mechanism advanced by them is therefore not confirmed. J. Stecki

P/045/60/0·9/004/008/001
:022/B070

AUTHOR: Głowacki, Jan

TITLE: Quenching of Photoluminescence of Solutions by
               Non-absorbing Foreign Molecules

PERIODICAL: Acta Physica Polonica, 1960, Vol. 19, No. 4, pp. 513 – 525

TEXT: In the theory of quenching of photoluminescence of solutions by
Jabłoński (Ref.8), the center is considered to consist of an excited
luminescent molecule enveloped by shells consisting of monomolecular
layers of the solvent, which may contain quenching molecules. Assuming
that the quenching probability is different from zero only for quench-
ing by quenchers situated within a certain active sphere, it is found
that $\frac{\eta}{\eta_0} = \frac{1}{1 - \frac{2}{\nu}}$, where η_0 denotes the yield without quenchers.

ν = nv, n = number of quenching molecules per unit volume, v = volume
of the active sphere. One aim of the present paper is to check experi-
mentally this formula for the case of quenching by non-absorbing foreign

Card 1/4

Quenching of Photoluminescence of Solutions   P/049/60/019/004/008/00?
by Non-absorbing Foreign Molecules   B027/B070

molecules. The formula was checked for liquid and solid solutions of
fluorescein, rhodamine B, and "yellowish" eosin quenched by KI and
tartaric acid. In all cases, the photoelectric method with photomulti-
plier was used for measuring the relative yield of fluorescence. Fig.
shows the experimental and theoretical curves of $\frac{I}{I_0}$ versus V for fluo-

rescein and rhodamine B, each in sugar solution quenched by KI. Fig.2

shows the experimental relative fluorescence yield $\frac{I}{I_0}$ as a function of

the concentration of quenchers for the same two substances and compares
it with the theoretical curve calculated by two different theories. It
is seen that the simplified model suffices for the description of the
quenching process of fluorescence by non-absorbing molecules. Inspite
of the approximations, the same formula also agrees with the experi-
mental results of quenching by absorbing molecules of luminescence of
non-viscous solutions. This is checked with aqueous solutions of flu-
rescein quenched by KI. The theoretical and experimental results are
given in Fig.3. The dependence of the degree of polarization of flu-
rescence on the concentration of the quenching molecules was also

Card 2/4

Quenching of Photo... ...
by Non-absorbing Foreign Molecules

S/04?/60/0... 1/00... /0...
8022/8070

investigated. The quenching type of luminescence of "yellowish" eosin
(microscopic dye, molecular weight 687 026) in water by tartaric acid
was also examined. The results of measurement of the intensity of lumi-
nescence and pH for different concentrations of tartaric acid are given
in Figs 6 and 7. Fig.8 shows the absorption spectrum. The change of
the absorption spectrum with the concentration of the tartaric acid
shows that the quenching of photoluminescence of eosin is the result of
the formation of non-fluorescent complexes of eosin and tartaric acid
molecules. The experimental points are in good agreement with the theo-
retical curve of the hyperbolic type. In the concluding remark it is
said that for an adequate description of luminescence quenching, the
simplified model of the luminescence center with the active sphere is
sufficient. The experimental results of photoluminescence quenching by
non-absorbing foreign molecules in liquid and solid solutions agree
with Jabłoński's theory. Moreover, it offers an adequate description of
quenching by absorbing foreign molecules, the absorption spectrum of
which overlaps the fluorescence band of the luminescence molecule. The
author expresses his indebtedness to Professor A. Jabłoński for sug-
gesting the subject and his critical remarks. He also thanks

Card 3/4

GLOWACKI, J.

SURNAME, Given Names

Country: Poland

Academic Degrees: /not given/

Affiliation: Department of Physics (Katedra Fizyki) of the Higher Pedagogical School (Wyzsza Szkola Pedagogiczna), Gdansk

Source: Warsaw, Bulletin de l'Academie Polonaise des Sciences, Serie des Sciences Mathematiques, Astronomiques et Physiques, Vol 9, No 2, Feb 61, pp 113-118

Data:
       "The Influence of Tartaric Acid on the Photoluminescence of Dye Solutions."

GPO 981643

GLOWACKI, J.

The influence of tartaric acid on the photoluminescence of dye
solutions. Bul Ac Pol mat 9 no.2:113-118 '61.

1. Department of Physics, Normal School Gdansk. Presented by A.
Jablonski.

(Tartaric acid)   (Dyes and dyeing)

GICWACKI, Jan

Decay and yield of the photoluminescence of rigid solutions.
Mater fiz chem Gdansk 2 63-66 '62.

1. Physics Department, School of Education, Gdansk.

P/047/62/013/004/002/003
D207/D308

AUTHOR: Głowacki, Jan

TITLE: Quenching the photoluminescence of solutions
                by foreign substances

PERIODICAL: Postępy fizyki, v. 13, no. 4, 1962, 431-454

TEXT: A review of Western and Soviet-bloc literature
mostly of the post-war period (1946-1960) but with some histori-
cal references going back to 1907. Subjects discussed are: Quen-
ching of photoluminescence by non-absorbing foreign substances
(diffusion theory of quenching of the photoluminescence of liquid
solutions; theory based on the layer model of a luminescence center;
quenching the fluorescence of solid solutions; polarization of the
emission anisotropy on quenching of the photoluminescence); migration
of the electron excitation energy in solutions (quenching of the
photoluminescence by such migration; quenching of the phosphorescence
and energy migration between unstable states). There are 80 references
and 10 figures.

Card 1/2

Quenching the photoluminescence ...

P/047/62/013/004/002/003
D207/D308

ASSOCIATION: Katedra Fizyki Wyższej Szkoły Pedagogicznej, Gdańsk (Chair of Higher Physics, Pedagogical College, Gdańsk)

Card 2/2

8/081/63/000/002/009/088
B119/B180

AUTHOR: Glowacki, J.

TITLE: Effect of illumination on various ionic forms of fluorescein
             in aqueous solution

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 2, 1963, 78, abstract
             2B473 (Bull. Acad. polon. sci. Sér. sci. math. astron. et
             phys., v. 10, no. 2, 1962, 115-119. [Engl.; summary in Russ.])

TEXT: Aqueous solutions of fluorescein (I) ($4 \cdot 10^{-6}$ g/cm^3) were exposed to
light of different wavelengths, and the changes in the absorption spectra
of the solutions so exposed were studied. It was shown that the two
maxima on the light absorption curve (4560 and 4853 Å) were due to the
fact that I in aqueous solution takes two forms: as a univalent and a
bivalent anion. When the solution is illuminated with light of λ (max)
5200 Å the univalent anions become converted to bivalent. Light of
λ (max) 7000 Å causes simultaneous decolorization of both ionic types of I.
[Abstracter's note: Complete translation.]

Card 1/1

GLOWACKI, Jan

Extinction of the photoluminescence of solutions by foreign
substances. Postepy fizyki 13 no.4:431-454 '62.

1. Katedra Fizyki, Wyzsza Szkola Pedagogiczna, Gdansk.

GLOWACKI, J.

On the dependence of the quenching constant of fluorescence
on the polarizability and diamagnetic susceptibility of
quenchers. Bul. Ac. Pol. mat. 11 no.7:487-492'63.

1. Department of Physics, Normal School, Gdansk. Pre-
sented by A. Jablonski.

GLOWACKI, J.; KAMINSKA, W.

Influence of neutral salts on the photoluminescence of
various ionic forms of fluorescein. Acta physica Pol 23
no.1:43-52 Ja '63.

1. Physics Department, High School of Pedagogy, Gdansk.

ACCESSION NR: AP4011478   P/0045/63/024/004/0555/0556

AUTHOR: Glowacki, Jan

TITLE: The dependence of the quenching of fluorescence of dyes on the position
of the maxima of fluorescence and absorption

SOURCE: Acta physica polonica, v. 24, no. 4, 1963, 555-556

TOPIC TAGS: quenching of dye fluorescence, fluorescence maximum, absorption
maximum, quenching constant

ABSTRACT: An analysis of the results of various author and another
shows that the probability of fluorescence quenching, by a certain subject, is a func-
tion of the polarizability of the quenching molecules, and it increases with the
temperature and, most probably, with the viscosity, the property, as well as still
another physical property of the quenching solvent. The plot of the log of the
fluorescence quenching constant rh/rh (rh is the quenching constant of fluores-
vin) versus the position of the fluorescence maximum in absorption spectra of the
luminescent molecule shows that this constant depends also on this position.

Card 1/2

ACCESSION NR: AP4033478

made on the free energy ... light corresponding to the
maximum of ... line of the excited mole-
cule of the dye. ... sorption induces a dipole moment in
the vibrating ... constant are in progress.

Orig. art. ... graph.

ASSOCIATION: Kafedra fiziki MGP ... Department, College of Pedagogy)

SUBMITTED: 16May63   DATE ACQ: 22Jan64   ENCL: 00

SUB CODE: OP   NO REF SOV: 001   OTHER: 006

Card 2/2

GLOWACKI, Jan

New achievements in the physics of lasers. Postepy fizyki
15   no. 3:275-286 '64.

1. Department of Physics, Teachers' College, Gdansk.

ACCESSION NR: AP4024336   P/0045/64/025/002/0301/0302

AUTHOR: Glowacki, Jan

TITLE: Influence of some optical processes on population inversion in a three-level laser

SOURCE: Acta physica polonica, v. 25, no. 2, 1964, 301-302

TOPIC TAGS: laser, three level laser, population inversion, metastable level, metastable level population, stimulated emission, diamagnetic impurity, luminescence, luminescence quenching, nonradiative transition

ABSTRACT: The author describes a new method of increasing the metastable level population in a laser with an organic active substance. Since the probability of intercombination transitions from an excited F level to a metastable M level is increased by the presence of diamagnetic impurities, the metastable level is populated, the excited level is depopulated and the intensity of slow fluorescence is increased due to nonradiative electronic transitions from the F to the M level. Since the amplification produced by stimulated emission is proportional to the excess population of the upper level, the presence of a nonabsorbing diamagnetic impurity such as KBr, KCNS, KI or other halides can increase the power emitted or decrease the generation threshold. The probability of such nonradiative transitions depends

Card   1/2

ACCESSION NR: AP4024336

on either the atomic number of the halogen atom or its diamagnetic susceptibility.

ASSOCIATION: Katedra Fizyki, Wyzsza Szkola Pedagogiczna, Gdansk (Department of Physics, Pedagogical Institute)

SUBMITTED: 29Nov63

DATE ACQ: 15Apr64

ENCL: 00

SUB CODE: EC, OP

NO REF SOV: 004

OTHER: 010

Card   2/2

GLOWACKI, J.

Influence of solvent structure on the dimerization process of water Rhodamin solution. Pt. 1. Acta physica Pol 26 no.5:905-918 N '64

1. Department of Physics of the Teachers College, Gdansk. Submitted April 13, 1964.

GLOWACKI, J.

Further investigations into the fluorescence quenching
of dyes by neutral salts. Acta physica Pol 25 no.6:
767-780 Je '64.

1. Department of Physics, Teachers College, Gdansk.

L 18807-66   EWT(1)   IJP(c)

ACC NR: AP5014676   SOURCE CODE: PO/0045/65/027/004/0527/0536

AUTHOR: Glowacki, J.

ORG: Physics Department, High Pedagogical School, Gdansk

TITLE: Molecular interaction mechanisms in fluorescence quenching processes

SOURCE: Acta physica polonica, v. 27, no. 4, 1965, 527-536

TOPIC TAGS: molecule, molecular interaction, fluorescence quenching, polarizability, organic fluorescence, dipole moment

ABSTRACT: It has been found that the charge of interacting molecules has no influ-
ence on the shape of the dependence of the fluorescence quenching constant of
solutions on the polarizability of the quenchers and their diamagnetic susceptibility.
In the case of organic quenchers (iodo-, bromo-, chlorobenzene) there is a similar
dependence of the fluorescence quenching constant on the polarizability and diamag-
netic susceptibility of the substituents as in the case of the ions J-, CNS-, Br-,
Cl-, suggesting that the primary role in the process of quenching should be attrib-
uted to the substituents and not the molecule as a whole. The presence of a dipole
moment in the quenching molecule results in a decrease in its quenching effective-
ness. Orig. art. has: 8 figures, 2 tables and 3 formulas. [Author's abstract.]

SUB CODE: 20/ SUBM DATE: 01Jun64/ ORIG REF: 001/ OTH REF: 007/

Card   1/1

GLOWACKI, J.

Traktor. (Wyd. 1.) Warszawa, Panstwowe Wydawn. Roln cze i Lesne, 1954. 147 p.

(Traction engines. 1st ed.)

               DA   Not in DLC

SO: Monthly List of East European Accessions (EEAL) L . Vol.6, No. 10, October 1957. Uncl.

GLOWACKI, Janusz, mgr inz.

Selected problems of plastics; International Congress in Amsterdam.
Przegl techn 84 no.23/24:5 9-16 Je '63.

GLOWACKI, Jan

Influence of some optical processes on population inversion
in a three-level laser. Acta physica Pol 25 no.2:301-302
F '64

1. Physics Department, High School of Pedagogy, Gdansk.

GLOVATSKI, Yan [Glowacki, Jan] (Pol'sha)

"Fulminant" choked disk.   Vrach.delo no.10:102-104 O '62.

(MIRA 15:10)

1. Neyrokhirurugicheskaya klinika (zav. - prof. doktor A.Kunitski)
Meditsinskoy akademii Krakova.
(OPTIC NERVE--DISEASES)

KUNICKI, Adam; GLOWACKI, Jan

Early and late results of surgical treatment of 170 cases of trigeminal neuralgia. Acta medica polona 3 no.1:55-60 '62.

1. The Neurosurgical Clinic, Medical Academy, Cracow Director prof. dr A.Kunicki.

(TRIGEMINAL NEURALGIA surg)

GLOWACKI, Jan

Fulminating papilledema. Acta medica polona 3 nc.2:203-206 '62.

1. Neurosurgical Clinic, Cracow Academy of Medicine, Cracow, Poland
Director: Professor Dr A. Kunicki.
        (PAPILLEDEMA case reports)

STEFANKO, Stanislaw; GLOWACKI, Jan

A case of haemangiopericytoma of the meninges. Acta med. pol. 3
no.4:455-461 '62.

1. Polish Academy of Sciences, Department of Neuropathology, Cracow,
The Neurosurgical Clinic, Medical Academy, Cracow. Director: Prof.
Dr A. Kunicki.
                (HEMANGIOPERICYTOMA)   (BRAIN NEOPLASMS)
                          (MENINGES)

GLOWACKI, Jan

Inflammatory subdural hygroma. Neurol neurochir psych 12 no.2:223-226
Mr-Ap '62.

1. Klinika Neurochirurgii, Akademia Medyczna, Krakow. Kierownik:
prof. dr A. Kunicki. Krakow, Botaniczna 3.

GLOWACKI, Jan

Inflammatory subdural hygromas. Neurologia etc., polska 12 no.2: 223-226 '62.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: Prof. dr A.Kunicki. (BRAIN NEOPLASMS case reports) (LYMPHANGIOMA case reports)

KUNICKI, Adam; GLOWACKI, Jan

Immediate and remote results of the surgical therapy of 170 cases of facial neuralgia. Neurol. neurochir. psychiat. pol. 13 no.3:325-330 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof. dr A. Kunicki.
(TRIGEMINAL NEURALGIA)   (NEUROSURGERY)
(POSTOPERATIVE COMPLICATIONS)

GLOWACKI, Jan

Traumatic subdural hygroma. Polski przegl. chir. 35 no.1:
31-38 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof. dr
A. Kunicki.
        (CYSTS)   (BRAIN INJURY, ACUTE)   (DURA MATER)

GLOWACKI, Jan

Fulminating papilledema. Neurol. neurochir. psychiat. pol.
13 no.2:225-227 '63.

1. Z Kliniki Neurochirurgii AM w Krakowie Kierownik: prof.
dr A. Kunicki.   (PAPILLEDEMA)

GRUDZINSKI, A.; SUWACKI, J.

Dept. of Physica Methodology, Higher Normal School
(Katedra Metodyki Fizyki, Wyzsza Szkola Pedagogiczna),
Gdansk (for both)

Crakow, Postepy fizyki, No 5, Sept-Oct 1965, pp 545-557

"Laser semi-conductors."

CHI, .

Monthly List of Current Accessions (LAMP). Vol. , no. 2, Feb. 1 .
Uncl.

GLOWACKI, P.

Settlement of deep-sea fishers in 1955-1956, p. 1. (GOSPODARKA RYBNA, Warszawa, Vol. 7, no. 2, Feb. 1955.)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 4, Jan. 1955, Uncl.

POLAND/Electricity - Semiconductors.   G

Abs Jour   : Ref Zhur Fizika, No 9, 1959, 20582

Author   : Glowacki, Pietr
Inst   : -
Title   : Hall Effect and Its Application in Engineering

Orig Pub   : Wiadom. elektrotechn., 1959, No 1, 11-13

Abstract   : No abstract.

Card 1/1

GLCWACKI, T., kapitan, inzynier

Atomic energy in aeronautics and rocket technology; a collection
of articles. Wojsk przegl 15 no.10:101-102 0 '61.

GŁOWACKI,W.

"Materiały metodyczne do nauczania maszynoznawstwa górniczego" (Methodical materials for teaching mining machine knowledge), by W. Głowacki. Reported in New Books (Nowe Ksiazki), No. 13, July 1, 1955

GŁOWACKI W.

　　Wybrane zagadnienia metodyczne do nauczania maszynoznawstwa górniczego (Selected methodical problems for teaching mining machine knowledge) by W. Głowacki. Reported in New Books (Nowe Ksiazki.) February 15, 1956. No. 4.

GLOWACKI, WITOLD WLODZIMIERZ

Fierwszy polski slownik farmaceutyczny i jego autor - Pawel Guldeniusz. Torun,
Nakl. Tow. Naukowego, 1953. 9 p. (Roczniki Towarzystwa Naukowego w Toruniu.
Rocznik 57, zesz. 1) /The first Polish pharmaceutical dictionary and its author,
Pawel Guldeniusz. German summary. illus., footnotes, name and place index/

SO: Monthly List of Russian Accessions, Library of Congress, March, 1953, Uncl.
East European   Vol. 2, No. 3   4

POLAND

GLOWACKI, Witold Wlodzimierz [Affiliation not given]

"Apothecaryship in Old Rzeszow."

Warsaw, Farmacja Polska, Vol 19, No 3, 25 Apr 63, pp 161-162.

Abstract: The author presents an historical outline of the apothecary shops and apothecaries in Rzeszow in the 17th and 18th centuries, and data on the practice of this profession as gleaned from the available sources. He encloses a complete listing of apothecaries for 1611-1764. There are two (2) Polish references.

1/1

GLOWACKI, Witold Wlodzimierz

Tasks of historians of Polisz pharmacy. Farmacja Pol. 19
no.19/20:41/-415 25 0'63

HALACKI, Mara   Tschkalerz

br Physical associations of the Terrytz rubber Island.
Parverja   O no. 3/4:

GLOWACKI, Witold Włodzimierz

Current professional organizations of pharmacists in Poland.
Farmacja Pol 21 no.17:375-382 2 Apr '65.

GLOWACZ, K.

Progressive protecting shielding by walling. Wisdom gorn 13 no.11:
406 N '62.
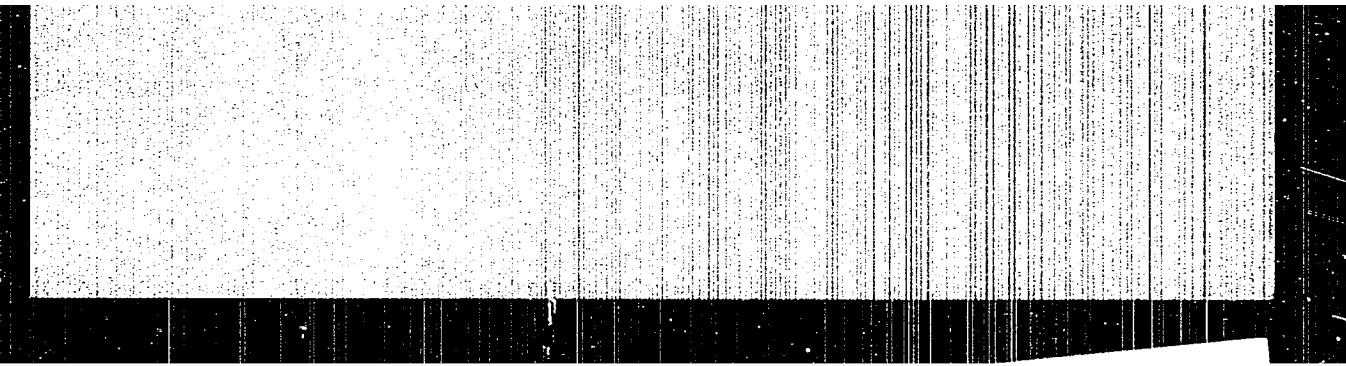
P/035/61/000/002/002/003
A076/A126

AUTHORS: Głowacki, Zbigniew, Master of Engineering; Kurzawa, Zbigniew, Doctor

TITLE: The influence of heat treatment upon the corrosion resistance and
              some mechanical properties of 3H13 steel

PERIODICAL: Przegląd Mechaniczny, no. 2, 1961, 55 - 58

TEXT: Among the various types of corrosion-proof chromium steel the 3H13
and the 4H13 types, produced according to PN-54/H-86020 standard, in some cases
present a number of problems. Both types showed a lower resistance against cor-
rosion than was required. In order to ascertain and remedy the fault, 500 sam-
ples made of 3H13 steel were investigated. The 3H13 steel contained 0.33% of C;
0.48% of Mn; 0.21% of Si; 0.022% of S; 0.017% of P; 13.60% of Cr and 0.15% of
Ni. The steel supplied by a steel plant was softened by annealing. The dimen-
sions of the samples were 10 x 10 x 55 mm, as specified by the PN/H-04370 stand-
ard. The samples were milled, polished and numbered from 1 to 500. They were
then hardened and annealed. The hardening temperature was 950, 1,000, 1,050 and
1,100°C. Preheating at 540 - 560°C was made in a salt-bath crucible furnace.
The running process at hardening temperature was performed in a salt-bath elec-

Card 1/4

The influence of heat treatment upon...

trode furnace containing $BaCl_2$ and lasted for 2, 5, 10, 20 and 30 minutes, re-
spectively. Afterwards the samples were quenched in oil. Annealing was made suc-
cessively at 100, 200, 300, 400, 500, 600 and 700°C. lasting for 30 minutes. In
the same succession batches of 3 samples each were heat treated. The hardness
impact strength and corrosion resistance were tested after hardening and anneal-
ing. The corrosion resistance tests were made as follows: samples were de-
greased in clear benzene and in an alkaline bath, i.e., 100 g of NaOH; 50 g of
Na_2CO_3 dissolved in 1 l of water. All samples were submerged for 36 days in ar-
tificial sea water containing NaCl - 990g; $MgCl_2$; $6H_2O$ - 271 g; $MgSO_4 \cdot 7H_2O$ -
125 g; $CaSO_4 \cdot 2H_2O$ - 30 g; K_2SO_4 - 32 g; and H_2O - 40 l. Test results showed
that heat treatment influences mechanical properties of the 3H13 steel. By in-
creasing the hardening temperature, the hardness also increases, but the impact
strength is reduced. At a hardening temperature of 950°C the hardness strength
is 40 ÷ 46 HRC, depending on the austenitizing period, and at 1,100°C it is 56
HRC. Austenitizing time plays an important role in the hardening process. It
was noted that hardness was proportional to austenitizing time. Impact strength
of hardened steel was 4 kg/cm^2 at 950°C and about 1 kg/cm^2 at 1,100°C hardening
temperature. Annealing at 950°C does not create basic changes in hardness, pro-
vided that the temperature range does not exceed 100°C. Annealing temperature of

Card 2/4

The influence of heat treatment upon...

P/035/61/000/002/002/003
A076/A126

200°C insignifically increases the hardness, drops at 300°C and increases again at 400 and 500°C. A sudden decrease in hardness was noted at 600 and 700°C. The 3H13 steel has the lowest corrosion resistance when hardened at 950°C and a higher one at 1,000, 1,050 and 1,100°C. Annealing in temperatures up to 500°C does not decrease its corrosion resistance, but higher annealing temperatures do. All changes in mechanical and corrosion-resistant properties of the 3H13 steel were caused by structural and phase changes during annealing. Considerable changes were noted in carbon found in chromium steel. This process was investi- gated by K. Kuo: "Iron and steel inst" T 173, 1953, 363 - 375 (Ref. 10). After annealing up to 500°C only $(Fe, Cr)_3C$ carbon was found. Annealing at 525 - 625°C had the result that $(Cr, Fe)_7C_3$ carbon was formed and after tempering at 650 ÷ 675°C $(Cr, Fe)_{23}C_6$ carbon was found in addition to $(Cr, Fe)_7C_3$ carbon. Above 700°C only $(Cr, Fe)_{23}C_6$ carbon was noted. According to investigation results the heat treatment conditions for 3H13 steel are as follows: hardening temperature 1,050 ÷ 1,070°C; pre-heating time for a sample measuring 10 x 10 mm should be 10 min; oil should be used as coolant and annealing temperatures ranging from 400 ÷ 450°C should not be exceeded. The 3H13 steel heat treated according to the above param- eters will have good corrosion resistance, hardness strength of 50 ÷ 53 HRC and impact strength of 5 ÷ 6 kg/cm^2. There are 6 figures, 6 photos and 22 referenc-

Card 3/4

The influence of heat treatment upon....

P, 035/61/000/002/002/003
A076/A126

es: 4 Soviet-bloc and 18 non-Soviet-bloc.

ASSOCIATION: Politechnika Poznańska (Poznań Polytechnic)

Card 4/4

GLOWACZ, Jozef, technik strzelniczy

Use of distance insertions in blastings by the M method in filling walls. Wiadom gorn 13 no.11:405 N '62.

1. Kopalnia Rozbark.

GLAZ U.   Metallurg.

First Congress of the Ore Mining Industry. Miana. gorn. 10 no. 9:
316-318 S '59.

GILEWACZ, Kazimierz

Application of hardened filling in the Marchlewski mine for
zinc-and-lead ore winning from the protection pillar of the
city of Bytom. Wiadom gorn 11 no. 12:446-450 D '60.

GLOWACZ, Kazimierz

A contribution to the problem of the identification, occurence
and deposition of heavy sands on the Hel Peninsula. Przem chem
39 no.3:148-152 Mr '60.

1. Zakladv Gornicze im. J. Msrchlewskiego, Bvtom

GLOWACS, Kazimierz

Activities of the factory circles of the Katowice II Branch
of the Association of Mining Engineers and Technicians.
Wiadom gorn 12 no. 12:439-441 D '61.

P/014/61/040/003/004/005
A221/A126

AUTHORS   Biernat, Janusz; Głowacz, Kazimierz; Łoziński, Jan; Pilch,
Władysław and Stachurski, Józef

TITLE   Production of commercial concentrates of zircon, ilmenite
and monazite from indigenous sea sands

PERIODICAL   Przemysł Chemiczny, no 3, 1961, 149-150

TEXT   In this article a method is described by which zircon,
ilmenite and monazite concentrates can be obtained from sea sands. For
several years the Instytut Metali Lekkich (Light Metals Institute)
carried out investigations in that direction but without success. The
authors managed to develop the method by which a product of standard
purity can be obtained. The final zircon concentrate is obtained by
separating same from rutile by means of flotation. Before floating
the mixture of zircon and rutile grains must be specially treated with
0.4% solution of fatty acid salts at 95°C. By doing so selective
adsorption takes place and fatty acid anions are adsorbed by zircon

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grains. After this treatment the grains are washed first in water and afterwards with diluted sulfuric acid. Fatty acids adsorbed are now converted into fatty acids hard to solve. Fatty acids are not wetted by water, therefore zircon grains are becoming hydrophobic. From the mixture so prepared, titano-magnetite, ilmenite and garnet are removed by magnets and the remaining grains diverted into flotation chamber. Before flotation this mixture contained about 70% zircon, 14% rutile and 14% of other opaque minerals. After flotation the concentration of zircon is increased to 97% with 87% efficiency. Obtaining ilmenite concentrate. From the sea sands treated with magnetic enrichment, a mixture of ilmenite and titano-magnetite was obtained. This mixture was roasted in CO atmosphere at 700°C. The product of this treatment was subjected to another magnetic enrichment from which two products were obtained: The titano-magnetite and ilmenite with 50.25% of TiO_2. Monazite separation: In sea sand samples 0.1% of monazite was detected. In the concentrate obtained there were 90.97% of monazite, 1.5% zircon, 0.9% of garnets and 6.63% of opaque minerals. (Abstractor's note: No details of monazite extraction are given.) The authors conclude. Polish sea

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sands are raw materials for commercial concentrates of zircon, rutile.
ilmenite, monazite and titano-magnetite. Zircon   and rutile are
separated by flotation. Separation of ilmenite from titano-magnetite
is achieved by reducing roasting and magnetic separation. There are 6
references: 3 Soviet-bloc and 3 non-Soviet-bloc. The references to the
English-language publications read as follows: Non-Ferrous Ore Dressing
in the USA. Documentation nr 54 Published by the Organization for
European Economic Cooperation, Paris. H.H. Dunkin, Ore Dressing Methods
in Australia and Adjacent Territories, Melbourne, 1953. K.L. Sutherland,
I.W. Wark, Principles of Flotation, Melbourne 1955.

ASSOCIATION: Katedra Przeróbki Mechanicznej Kopalin Akademii Górniczo-
              Hutniczej (Mining and Metallurgical Academy, Chair of
              Mechanical Processing of Mined Raw Materials) Kraków.

SUBMITTED: 15 December 1960

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GLOWACZ, Kazimierz, inz.

    Nonferrous ore mining in Yugoslavia, with special reference to
    the Bor and Trepca mines. Rudy i metale 6 no.10:458-463 0 '61.

GLOWACZ, Kazimierz, inz.; SEWERYNSKI, Boguslaw, dr., inz.

Nonferrous metal ore mining in Yugoslavia. Pt. 2. Rudy i metale 6 no.11:500-506 '61.

(Yugoslavia—Nonferrous metals)

GLOWACZ, Kazimierz, inz.

The seventeenth "Parborka" in People's Poland. Rudy i metale A no.12:
525-526 D '61.

1. Prezes Stowarzyszenia Inzynierow i Technikow Gornictwa, Oddzial
Katowice II.

GLOWACZ, Kazimierz, inz.; KLUSZCZYNSKI, Aleksander, mgr.,inz.; SIWERSKI, Boguslaw, dr.,inz.

Mining of nonferrous ores in Yugoslavia. Pt.3. Rudy i metale
6 no.12:551-559 D '61.

GLOWACZ, K., inz.

The tasks of the technician and engineer in the mining industry
of nonferrous ores. Przegl techn no.39:5,7 30 S '62.

KRZYWDZINSKI, Stanislaw, mgr.,inz.; GLOWACZ, Kazimierz, inz.

Application of operational tests in nonferrous ores dressing.
Rudy i metale 7 no.1:12-15 '62.

GLOWACZ, Kazimierz, inz.

    Self advancing movable shield supports. Rudy i metale 7
    no.7:330-333 Jl '62.

GLOWACZ, K., inz. ~

An automation device for the PP-80 type mining pumps. Rudy i
metale 7 no.9:429-430 S '62.

KACPRZAK, Wincenty, mgr inz.; GLOWACZ, Kazimierz, inz.; LUBOCH, Wladyslaw,
      mgr inz.; LEMPART, Stanislaw, inz.

      Increase of the mechanization of Zn-Pb ore winning in the
      mining industry. Rudy i metale 7 no.12:539-546 D '62.

GLOWACZ, Kazimierz, inz.

Tasks of technicians and graduate engineers in ore mining.   Rudy i
metale no.2:73-75 F '63.

KRZYWDZINSKI, Stanislaw, mgr inz.; GLOWACZ, Kazimierz, inz.

Application of operational research in the nonferrous ore industry.
Pt.2. Rudy i metale 8 no.1:1-6 Ja '63.

GLOWACZ, Kazimierz, mgr inz.; KRZYWDZINSKI, Stanislaw, mgr inz.

Operational research in the nonferrous ore industry. Pt. 3.
Rudy i metale 8 no.4:129-132 '63.

GLOWACZ, K., mgr inz.

Probe for acoustic profiling of drilling holes. Rudy i metale
8 no.4:141-142 '63.

GLOWACZ, Kazimierz, mgr inz.

How to increase the winning of ores? Przegl techn 84 no.48:5
1 D '63.

GLOWACZ, K., mgr inz.

Annual Meeting of the Association of German Mining and Metallurgy
Engineers and the International Symposium on Special Materials for
Electric Engineering, Erfurt, October 15-19, 1963. Rudy i metale 9
no.2:100-103 F '64.

GLOWACZEWSKI, Marian, inz.; KRAWCZYNSKI, Feliks, mgr inz.

Completely welded Ok55-3 type locomotive frame. Przegl kolej
machan 13 no.8:237-239 Ag '61.

GROMACZEWSKI, M.

Organization of work and the selection of assortments in the employment of
the disabled. p. 5.
(RACJONALIZATOR, Vol. 4, no. 2, Feb. 1957, Warszawa, Poland)

SO: Monthly List of East European Accessions (EEAL) LC. Vol. 6, No. 12, Dec. 1957.
Uncl.

S/275/63/000/002/026/032
D405/D301

AUTHORS: Tabin, J., Kurek, M. and Glowalla, J.

TITLE: Ultrasonic device for fast control of thick-sheet
                  iron

PERIODICAL: Referativnyy zhurnal, Elektronika i eye primeneniye,
                  no. 2, 1963, 50, abstract 2V184 P (Pol'sk pat., kl.
                  42 k, 47, no. 44683, 20.07.61 (Polish patent))

TEXT: The patented device permits fast control by the con-
tact method, of iron sheets of a non-worked surface. It consists of
a box-like body which moves on rollers; the body contains 2 groups
of transducers which operate under generation and reception condi-
tions respectively, and which are separated from each other by a
sound-insulating partition (textolite, cork) reaching to the very
bottom of the body. The contact liquid is driven from above, via a
flexible hose inside the body, into a reservoir situated on the
transducers. The excess contact liquid together with the gas bub-
bles rising from its surface, is removed via a slot in the upper

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Ultrasonic device ...

part of the side-wall of the body. From the reservoir the main liquid flow is driven via a pair of flat nozzles into the lower pressure chamber, situated directly above the sheet under investigation. The nozzles are placed on both sides of the transducers, towards the roller mounted on bearings behind and in front of the body. The presence of the pressure chamber ensures the automatic wetting of the sheet and reduces the dead zone. The body is equipped with a long handle, used by the operator for moving the former during checking.
/Abstracter's note: Complete translation_7

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BLAKALA, Kazimierz, inz.; MICHALIK, Janusz, inz.; RESPONDEK, Alojzy, inz.
    TARNOWSKI, Ladyslaw; GICMANIK, Edward

    Increasing the disposable power of the power plant of the Florian
    Steel Works by 7 MW. Gosp paliw 11 Special issue no.(95):59 Ja '63.

    1. Huta Florian- kopalnia Polska.

GLOWANIA, Jerzy, mgr

New articles of the Carl Zeiss Jena Works at the Leipzig Fair
1963. Chemik 16 no. 4:117-119 Ap '63.

GLOWANIA, Jerzy, mgr

     Chemical concerns at the 32d International Poznan Fair;
     The Imperial Chemical Industries of Great Britain. Chemik
     16 no.7/8:202-205 Jl-Ag '63.

     1. Politechnika Slaska, Gliwice.

GLOWATZKI, Ernst

(2)

Glowatzki, Ernst. Tafel der Jacobischen elliptischen Funk-
tion $\varphi = am\left(\frac{m}{n}K\right)$. Abh. Bayer. Akad. Wiss. Math.-
Nat. Kl. (N.F.) no. 61, 27 pp. (1953).
Table to three decimals of a degree of Jacobi's

$$\phi = am[m \cdot K/n ; \sin \Theta]$$

for $n = 2(1)12$, $\Theta = 0°(1°)90°$ to enable Jacobi's elliptic func-
tions to be calculated from trigonometric tables. [The
author seems to be unaware of the existence of the reviewer's
"Die elliptischen Funktionen von Jacobi" [Springer, Berlin,
1931] and "Jacobian elliptic function tables" [Dover, New
York, 1950; these Rev. 13, 987] which give results directly.]
L. M. Milne-Thomson (Greenwich).

Mathematical Review
June 1954
Numerical and
Graphical Methods

Structure of o-dioazoxides. B. Glowiak (Politechnika, Wroclaw, Poland). *Bull. acad. polon. sci., Sér. sci., Chim., géol. cl géograph.* 8, 1–4(1960)(in English).—Infrared absorption spectra of 8 o-diazoxides (I) were measured between 4.3 and 7.7 μ and compared with spectra of similar compds. It was found that 4,6-dinitro-2-diazophenol (i.e. diazoxide obtained by diazotization of picramic acid), 2,6-dinitro-4-diazo-m-cresol, and 4,6-dinitro-2-diazoresorcinol (II) have a quinoid structure, and that 5-nitro-3-diazosalicylic acid, its Pb salt, 4,6-dinitro-2-diazo-3-hydroxybenzoic acid, and its Pb salt have a diazonium structure. Pb salt of II may have either quinoid or diazonium structure. Quinoid I are dark yellow or dark brown, sol. in org. solvents and dil. inorg. acids, and they decomp. and darken in light; diazonium I are light yellow, sparingly sol. in org. solvents, less thermolabile but more sensitive to impact, friction, and flame than quinoid I.   J. Strelki—

Distr: 4E3d

/ Lead salts or aromatic azides. B. Glowink (Politech., Wrocław, Poland). Bull. acad. polon. sci.; Sér. sci. Chim., géol. et géograph. 8, 5-8(1960)(in English).—Investigations on new initiating explosives were reported. The soln. of diazodinitrophenol in 20-25-fold amt. of Me₂CO, treated at 35-40° with 10% soln. of Na azide introduced in stoichiometric proportion, dropwise and with vigorous stirring, gave a soln. of 4,6-dinitro-2-azidophenol Na salt, which, acidified with a few drops of dil. HNO₃ and treated with 10% aq. PbNO₃ added dropwise at 25-30° in a 15% excess, gave a light brown ppt. This filtered off, rinsed with H₂O and dried at 40°, afforded 4,6-dinitro-2-azidophenol Pb salt in 90% yield. In a similar way were prepd. Pb salts of 2,6-dinitro-4-azido-m-cresol and 5-nitro-3-azido-salicylic acid. Infrared absorption spectra showed for all 3 salts the N₃ azide group, 2140, and no quinoid-structure, 1664 and 1653 cm.⁻¹ absorption bands, irrespective of the quinoid or diazonium structure of the corresponding diazoxides. The susceptibilities to impact, flame, and detonation, and the ignition temp. were detd. The compds. prepd. were found to be similar to Pb trinitroresorcinate and thus were "pseudonitiating" explosives.   J. Stecki

GLOWIAK, B.

Distr: 4E3d

Structure of diazonium salt of nitroform. B. Glowiak (Politechnika, Wrocław, Poland). Bull. acad. polon. sci., Ser. sci., Chim., géol. et géograph. 8, 9-12(1960)(in English). —The Ponzio synthesis (C.A. 19, 1178) was modified as follows: a mixt. of 20 ml. HCl, d. 1.9, 60 g. ice, and 9.3 g. PhNH₂ was diazotized at 0° with 7 g. NaNO₂, the soln. left 10-15 min., and 15.1 g. HC(NO₂)₃ added to obtain PhC(NO₂)₃ (I) in 82% yield after simple crystn. from Me₂CO. I was hygroscopic and darkened in light. Infrared absorption spectra between 6 and 8 μ were examd. and compared with those of phenyldiazonium acetate, trinitromethyl chloride, nitroform, and the K salt of nitroform. Absorption bands of 1629, 1374, and 1291 cm.⁻¹, as well as the lack of absorption in the region of 2237 to 2132 cm.⁻¹ (N≡N bond), indicated a structure [PhN≡N]C(NO₂)₃⁻ for I.   J. Stawski—

Distr: 4E2a/4E3d

Some [explosive] properties of N,N'-dinitromethylenedi-amine. Bohdan Głowiak. *Biul. Wojskowej Akad. Tech. im. Jarosława Dąbrowskiego* 9, 77–82(1960))(English summary); cf. Piskorz and Urbański, *CA* 54, 17012f.—CH$_2$(NHNO$_2$)$_2$ (I), m.p. 102°, prepd. after Brian and Lamberton (*CA* 44, 1410h), had velocity of detonation 8864 m./sec. at d. (of cartridge) 1.7, explosion temp. 217°, and impact test (picric acid as 100%) 100%; PbN$_6$ min. detonating charge was 0.005 g.; wt. losses of I (60°, 500 hrs.) were 4 and 2.5% in an open and sealed vessel. Pb salt of I, m.p. 40°, showed explosion temp. 195°, impact work 0.0584 kg. m./ sq. cm., and fired from a burning string from a distance of 2–3 cm.; wt. losses at 60° after 24, 48, 76, 100, 200, 300, 400, and 500 hrs. in an opened (and a sealed) vessel, were: 0.24 (0.0), 0.38 (0.05), 0.48 (0.10), 0.52 (0.15), 0.54 (0.15), 0.56 (0.15), 0.58 (0.15), and 0.60% (0.15%), resp.; water absorptions after 24, 48, 76, 100, 200, 500, and 1000 hrs. at 80% (100%) relative humidity, were: 0.11 (0.14), 0.16 (0.37), 0.20 (0.50), 0.23 (0.63), 0.30 (0.80), 0.38 (0.84), and 0.52% (0.93%), resp. I had an absorption band at 1582 cm.$^{-1}$; the Pb salt had not, unless acidified. I was considered similar to pentaerythritol tetranitrate as regards explosive characteristics.   A. Szafrański

GLOWIAK, Bohdan; SMOLENSKI, Dionizy

The influence of metallic ion on the sensitiveness of azidophenol
salts. Chemia stosow 4 no.2:253-263 '60.   (EEAI 10:3)

1. Katedra Technologii Zwiazkow Azotowych II Politechniki
Wroclawskiej.
   (Ions) (Metals) (Azido group) (Phenol)
    (Cresol) (Nitro group)

GLOWIAK, B.

On the structure of ortho-diazoxides. Bul chim PAN 8 no.1:1-4
'60.   (KEAI 10:9/10)

1. Department II of Technology of Nitrogen Derivatives, Technical
University, Wroclaw. Presented by T. Urbanski.

(Diazo compounds)   (Oxides)

GLOWIAK, B.

Lead salts of aromatic azides. Bul chim PAN 8 no.1:5-8 '60.

(BEAI 10:9/10)

1. Department II of Technology of Nitrogen Derivatives, Technical University, Wroclaw. Presented by T. Urbanski.

(Lead salts)   (Azides)   (Aromatic compounds)

GLOWIAK, Bohdan

Diazo oxide structure. Rocz chemii 34 no.5:1349-1363 '60.
(NEAI 10:9)

1. Department of Nitrocompounds Technology II, Institute of Techno-
logy, Wroclaw.

(Diazo compounds)

_II.8200_

POL/16/61/000/00:/001/001
D225/D501

AUTHORS: Głowiak, Bohdan, Doctor of Engineering, Assistant
            Professor, and Smoleński, Dioniziy, Professor

TITLE: An attempt to interpret explosive properties

PERIODICAL: Wiadomości chemiczne, no. 3, 1961, 151-165

TEXT: This is a short review, based chiefly on the works of
Western investigators, of tentative correlations between certain
explosive properties, compositions, structures and thermochemical
parameters of explosives. Of the earlier workers, W. Plec (Ref.
1: ŻOCh, 1935, 5, 173) defined explosives as compounds containing
explosophores and auxoexplosives, by analogy with chromophores
and auxochromes. This work is considered to be of historical in-
terest only. Oxygen balance is next defined, the author stressing
that no distinction is made between oxygen bonded to carbon or
hydrogen and oxygen bonded to nitrogen; the majority of explosi-

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An attempt to interpret ...

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D228/D301

ves are stated to be oxygen-negative. A brief account is given of
the work of W.C. Lothrop and G.R. Handrick (Ref. 6: Chem. Revs.,
1949, 44, 419), who found the explosive power to be proportional
to the oxygen balance, increasing to a maximum as the oxygen ba-
lance tends to ward zero. These authors introduced the term
"plosophores" for groups bestowing explosive properties on a mole-
cule, and divided them into two fundamentally different classes.
Primary plosophores include nitric esters, aromatic and aliphatic
nitro-compounds and nitroamines, whilst azo- and amino- deriva-
tives, nitro-compounds, perchlorates, peroxides, ozonides etc.
belong to the secondary class. Relationships between the shatter-
ing power and the oxygen balance are illustrated for aromatic
nitro-compounds, nitroamines and nitric esters, showing that for
these compounds the maximum power is associated with zero oxygen
balance. Molecules with several plosophoric groups ("hybrids")
exhibit a similar effect, although the relationship is less re-
gular. No such relationship has been found for the secondary

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plosophores or groups such as -OH, -Cl, -CO (auxoexplosives)
which modify the properties of explosive compounds. This is as-
cribed to the lack of differentiation between O-C or O-H and O-N
bonds in calculating the oxygen balance. The same authors also
found that oxygen balance affected detonation velocity, although
the relationship is not well defined. Discussing Lothrop's and
Handrick's work, A. Schmidt (Ref. 7: Chimie et industrie, 1952,
67, 253) considers that the effect of oxygen balance on the ex-
plosive power should be supplemented with thermochemical data.
Heat of explosion is defined as the difference between the heat
of formation of the explosion products (q_p) and the heat of for-
mation of the explosive from the elements (q_f). Oxygen balance
is connected with, but not a function of q_p which increases with
the ratio $\frac{H}{C}$ for the same oxygen balance, and decreases with in-
creasing nitrogen. Relative proportions of other atoms and the
nature of the oxygen should thus be considered in assessing the
oxygen balance, since these influence q_f which, according to

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D228/D301

Schmidt, is the dominant factor influencing the explosive properties. Mention is made of the work of J.F. Roth (Ref. 9: Z. Schiess-u.Sprengstoffwesen, 1941, 36, 4, 26,52) who found that for mixtures of tetranitromethane and nitrobenzene, the explosive properties increased to a maximum as the oxygen balance approached zero, and that of A. Stettbacher (Ref. 2: Z. Schiess-u.Sprengstoffwesen, 1918, 13, 225; 1919, 14, 220; 1920, 15, 165; 1930, 25, 439; 1942, 37, 42, 62) who believes that structure of the explosive is the dominant factor. This is shortly discussed quoting several authors including D. Smoleński and W. Cżuba (Ref. 11: Zesz. nauk. Politechniki Wrocławskiej; Chemia, 1955, 7, 3) and T. Urbański and K. Kruszyńska Szyc-Lewańska (Ref. 12: Biuletyn WAT, 1953, 4, 3; and Ref. 13: ibid., 1953, 4, 14) showing that various groups can affect the explosive properties. M. Berthelot and Matignon (Ref. 15: Compt. rend., 1891, 113, 246) show that the heat of combustion decreases by ~ 31 kcals for every additional $-NO_2$ group in the ring, concurrently with increasing ex-

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